

MBR4040 thru MBR4060

40 Amp HT Power Schottky Barrier Rectifier

40 Volts to 60 Volts

Features

- * High Junction Temperature Capability
- * Low Leakage Current and Low Forward Voltage Drop
- * Low Power Loss and High Efficiency

Maximum Ratings

- * Operating Junction Temperature: 150°C
- * Storage Temperature: - 55 °C to +175°C
- * Per diode Thermal Resistance 2.2°C/W Junction to Case

Mechanical Data

- * Case: Molded Plastic
- * Terminals: Plated Lead Solderable per MIL-STD-202, Method 208
- * Marking: Type Number
- * Weight: 6 grams (approx)



TO-3P

Dim	Millimeter		Inches	
	Min.	Max	Min.	Max.
A	4.70	5.30	0.185	0.209
B	2.79	3.18	0.110	0.125
C	1.50	2.50	0.059	0.098
D	1.00	1.40	0.040	0.055
E	2.00	2.40	0.079	0.094
F	3.00	3.40	0.118	0.133
G	0.400	0.800	0.016	0.031
H	21.8	22.4	0.860	0.883
J	15.9	16.5	0.627	0.650
K	5.45	----	0.215	----
L	20.2	20.6	0.795	0.810
M	4.00	4.60	0.157	0.180
N	3.00	3.40	0.118	0.133
P	6.80	7.62	0.268	0.300
Q	4.44	5.30	0.175	0.210
R	1.72	2.03	0.068	0.080

Symbol	Characteristics	MBR4040	MBR4045	MBR4060	Unit
VRRM	Maximum Recurrent Peak Reverse Voltage	40	45	60	V
VRM	Maximum DC Blocking Voltage	40	45	60	V
VR(RMS)	Maximum RMS Voltage	28	31.5	42	V
V _F	Maximum Forward Voltage Drop Per Element I _F =40A @T _J =25°C	0.70		0.80	V
I _{F(AV)}	Average Forward Current	40			A
I _{FSM}	8.3ms Single Half-Sine-Wave Superimposed On Rated Load	300			A
dv/dt	Voltage Rate Of Change (Rated V _R)	10000			V/us
I _R	Maximum DC Reverse Current At Rated DC Blocking Voltage	T _J =25°C 0.2		T _J =125°C 40	mA
R _{thJC}	Typical Thermal Resistance (Note 2)	2.0			°C/ W
C _J	Typical Junction Capacitance (Note 3)	400			pF
T _J	Operating Temperature Range	-55to+150			°C
T _{STG}	Storage Temperature Range	-55to+175			°C

- NOTES: 1. 300us Pulse Width, Duty Cycle 2%.
 2. Thermal Resistance Junction To Case.
 3. Measured At 1.0MHz And Applied Reverse Voltage Of 4.0V DC.